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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,010

03/29/2006

Yoshihide Nakane

127546

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25944 7590 04/08/2009

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

LAU, KEVIN

ART UNIT

PAPER NUMBER

4147

MAIL DATE

DELIVERY MODE

04/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,010	Applicant(s) NAKANE, YOSHIHIDE	
	Examiner KEVIN LAU	Art Unit 4147	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3-29-2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3-29-2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3-29-2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).
2. Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

4. A person shall be entitled to a patent unless –
5. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 6 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by **European Patent Number EP 1 286 297 A1 to Nakamura.**

7. As per claim 6, Nakamura discloses an anti-theft system for a vehicle, comprising:

8. certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the vehicle; **(Paragraph 19: “An apparatus and method of authentication of the present invention authenticates as to whether there is an agreement**

Art Unit: 4147

between the identification signal of a portable unit (e.g. remote-control transmitter in a keyless entry system of an automobile) and the identification signal stored in an authenticating apparatus main body (to be considered in a form, e.g. incorporated in an automobile).")

9. human body certification information certifying means, the means being for confirming human body certification information of the person; **(Paragraph 19: "On the other hand, inputted biometrics information (fingerprint, facial image, voiceprint, retina pattern or physiognomy) is compared with previously stored biometrics information, to carry out personal authentication as well.")**

10. door lock control means for unlocking a vehicle door in a case where the electronic key is certified by the certifying means of the electronic key for getting in the vehicle **(Paragraph 40: "The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.")** and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the door is unlocked; **(Paragraph 87: "In step S48, the biometrics authenticating section 103 determines whether a comparison result is in agreement or not, to output a determination result to the control section 11. For example, in the case of a determination that the comparison**

result is in agreement, the process proceeds to step S49 where the control section 11 controls the lock system 12 to unlock the door lock.”)

11. writing means for writing information that the human body certification information is confirmed in the electronic key as readable or delete-able information, when the vehicle door is unlocked by the door lock control means based on the electronic key being certified by the certifying means of the electronic key for getting in the vehicle and the human body certification information of the person being confirmed by the human body certification information certifying means; **(Paragraph 35 and 36: “The biometrics authenticating section 103 stores to the biometrics database 104 the biometrics information of an authorized user inputted to the sensor section 101 upon registration. When authenticating the user, this biometrics information is compared with the biometrics information inputted through the sensor section 101. A result of comparison is outputted to the control section 11. Meanwhile, the biometrics authenticating section 103, upon registering biometrics information, sets and registers a PIN (Personal Identifier Number: identification number of biometrics information) as corresponding digital information, and further encrypts this PIN and sends it through a communicating section 15 to a portable unit 2 possessed by each authorized user. This encrypted PIN is stored with correspondence to the biometrics information, as shown in Fig. 4. There are various forms of storing the PIN and biometrics information with correspondence.”)**

Art Unit: 4147

12. certifying means of an electronic key for starting an engine, the means being for certifying the electronic key held by a person who intends to start the engine; and **(Paragraph 41: “The engine immobilizer 106 compares an immobilizer ID 33d previously stored in a memory 33 transmitted by the portable unit 2 with an immobilizer ID 107a stored in the storage section 107, to control engine-ignition on/off (engine lock) depending on agreement or not.)**

13. engine starting control means for starting the engine of the vehicle in a case where the electronic key is certified by the certifying means of the electronic key for starting the engine and the information that the human body certification information is certified is written in the electronic key, after the vehicle door is unlocked by the door control means. **(Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)**

14. As per claim 12, Nakamura discloses an anti-theft system for a vehicle, comprising:

15. certifying means of an electronic key for starting a vehicle engine, the means being for certifying the electronic key held by a person who intends to start the vehicle; **(Paragraph 41: “The engine immobilizer 106 compares an immobilizer ID 33d previously stored in a memory 33 transmitted by the portable unit 2 with an immobilizer ID 107a stored in the storage section**

Art Unit: 4147

107, to control engine-ignition on/off (engine lock) depending on agreement or not.)

16. human body certification information certifying means, the means being for confirming human body certification information of the person; **(Paragraph 19: "On the other hand, inputted biometrics information (fingerprint, facial image, voiceprint, retina pattern or physignomy) is compared with previously stored biometrics information, to carry out personal authentication as well.")**

17. engine starting control means for starting the engine in a case where the electronic key is certified by the certifying means of the electronic key for starting the engine and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the engine is stopped running; **(Paragraph 41: "When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.")**

18. writing means for writing information that the human body certification information is confirmed to the electronic key as readable or delete-able information, when the engines is started by the engine starting control means based on the electronic key being certified by the certifying means of the electronic key for starting the engine and the human body certification information of the person being confirmed by the human body certification

Art Unit: 4147

information certifying means; **(Paragraph 35 and 36: “The biometrics authenticating section 103 stores to the biometrics database 104 the biometrics information of an authorized user inputted to the sensor section 101 upon registration. When authenticating the user, this biometrics information is compared with the biometrics information inputted through the sensor section 101. A result of comparison is outputted to the control section 11. Meanwhile, the biometrics authenticating section 103, upon registering biometrics information, sets and registers a PIN (Personal Identifier Number: identification number of biometrics information) as corresponding digital information, and further encrypts this PIN and sends it through a communicating section 15 to a portable unit 2 possessed by each authorized user. This encrypted PIN is stored with correspondence to the biometrics information, as shown in Fig. 4. There are various forms of storing the PIN and biometrics information with correspondence.”)**

19. certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the vehicle; and **(Paragraph 40: “The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”)**

20. door locking control means for unlocking the door in a case where the electronic key is certified by the certifying means of the electronic key for getting

Art Unit: 4147

in the vehicle **(Paragraph 40: “The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”)** and information that the human body certification information is confirmed is written in the electronic key, **(Paragraph 87: “In step S48, the biometrics authenticating section 103 determines whether a comparison result is in agreement or not, to output a determination result to the control section 11. For example, in the case of a determination that the comparison result is in agreement, the process proceeds to step S49 where the control section 11 controls the lock system 12 to unlock the door lock.”)** after the engine is started by the engine starting control means.

(Paragraph 126: “Incidentally, in the present description, the processes, to be executed chronologically in the sequence described in the steps describing the program recorded on the recording medium, are not necessarily processed in a chronological order, of course including the processes to be executed in a parallel or individual fashion.” Therefore, the door can be unlocked and engine started in any order.)

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

22. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over **European Patent No. EP 1 286 297 A1 to Nakamura** in view of **U.S. Patent No. 5,760,701 to Mitsumoto**.

24. As per claim 1, Nakamura discloses an anti-theft system for a vehicle, comprising:

25. certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the vehicle; **(Paragraph 19: "An apparatus and method of authentication of the present invention authenticates as to whether there is an agreement between the identification signal of a portable unit (e.g. remote-control transmitter in a keyless entry system of an automobile) and the identification signal stored in an authenticating apparatus main body (to be considered in a form, e.g. incorporated in an automobile).")**

26. human body certification information certifying means, the means being for confirming human body certification information of the person; **(Paragraph 19: "On the other hand, inputted biometrics information (fingerprint, facial image, voiceprint, retina pattern or physiognomy) is compared with previously stored biometrics information, to carry out personal authentication as well.")**

27. door lock control means for unlocking a vehicle door in a case where the electronic key is certified by the certifying means of the electronic key for getting in the vehicle **(Paragraph 40: "The lock system 12 compares a keyless entry**

Art Unit: 4147

ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”) and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the door is unlocked; **(Paragraph 87: “In step S48, the biometrics authenticating section 103 determines whether a comparison result is in agreement or not, to output a determination result to the control section 11. For example, in the case of a determination that the comparison result is in agreement, the process proceeds to step S49 where the control section 11 controls the lock system 12 to unlock the door lock.”)**

28. ... the vehicle door is unlocked by the door lock control means based on the electronic key being certified by the certifying means of the electronic key for getting in the vehicle **(Paragraph 40: “The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”)** and the human body certification information of the person is confirmed by the human body certification information certifying means; **(Paragraph 87: “In step S48, the biometrics authenticating section 103 determines whether a comparison result is in agreement or not, to output a determination result to the control section 11. For example, in the case of a determination that the comparison result is in**

Art Unit: 4147

agreement, the process proceeds to step S49 where the control section 11 controls the lock system 12 to unlock the door lock.”)

29. certifying means of an electronic key for starting an engine, the means being for certifying the electronic key held by a person who intends to start the engine; and **(Paragraph 41: “The engine immobilizer 106 compares an immobilizer ID 33d previously stored in a memory 33 transmitted by the portable unit 2 with an immobilizer ID 107a stored in the storage section 107, to control engine-ignition on/off (engine lock) depending on agreement or not.)**

30. engine starting control means for starting the engine of the vehicle in a case where the electronic key is certified by the certifying means of the electronic key for starting the engine and the electronic key is an electronic key whose ID information is memorized in the memory means, after the vehicle door is unlocked by the door lock control means. **(Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)**

31. But does not disclose memory means for memorizing ID information of the electronic key when the vehicle door is unlocked by the door lock control means.

32. However Mitsumoto discloses memory means for memorizing ID information of the electronic key when the vehicle door is unlocked by the door lock control means **(Fig. 2: The vehicle door is unlocked 106 and eventually**

Art Unit: 4147

enters ID registration mode 114. col. 3 line 4: "In the ID code registration mode, the ID code transmitted from the mobile transmitter 10 is, registered in the memory 24."

33. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Mitsumoto's memory means in memorizing the ID code after the door is unlocked in Nakamura's door lock system with reasonable expectation that this would result in a door lock system that memorized ID information of a key after the doors were unlocked. This method was within the ordinary ability of one of ordinary skill in the art based on the teachings of Mitsumoto because it is cheaper than using a switch to detect the presence of the key while the engine is running. **(col. 1 lines 17-23: "It is the current practice to avoid the high cost of the switches specified for the registration of the respective ID codes by operating the keyless entry control unit in its ID code registration mode as long as the operator operates the ignition key or the like provided for the vehicle in a predetermined procedure.")**

34. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura and Mitsumoto to obtain the invention as specified in claim 1.

35. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over **European Patent No. EP 1 286 297 A1 to Nakamura** in view of **U.S. Patent No. 5,760,01 to Mitsumoto** as applied to claim 1 above, and in further view of **U.S. Patent No. 5,229,648 to Sues et al.**

Art Unit: 4147

36. As per claim 2 in reference to claim 1, Nakamura in view of Mitsumoto teach claim 1. Nakamura discloses an anti-theft system for a vehicle as claimed in claim 1,

37. Nakamura and Mitsumoto do not disclose wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine after the door is unlocked by the door lock control means

38. Sues discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine after the door is unlocked by the door lock control means **(col. 3 line 42: “In the event the protected part becomes disconnected accidentally, the system has a manual override, activated by a code from a keypad in the vehicle that allows a predetermined number of starts”)**

39. Nakamura discloses the engine starting control means allows starting the engine for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, after the door is unlocked by the door lock control means. **(Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)**

40. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Sues' system for allowing a predetermined number

Art Unit: 4147

of starts in Nakamura and Mitsumoto's immobilizer storage section of the anti-theft system to improve the system with reasonable expectation that this would result in a vehicle that allowed only a certain number of starts. This method for improving Nakamura and Mitsumoto's system was within the ordinary ability of one of ordinary skill in the art based on the teachings of Sues because it would discourage thieves to steal the vehicle since the vehicle can only be used a certain number of times before needing to reset the number for allowing vehicle starts, this would cause the car to have no resale value. **(col. 4 lines 16-21: "A signature code (SC) address is created for each protected component of every vehicle with the Autosafe system manufactured worldwide. Consequently, there can be no resale market for stolen vehicles and components covered by the system. If not authorized by the central database, a protected part having the wrong signature code or no SC will not function nor allow the vehicle in which it is installed to function.")**

41. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura and Mitsumoto and Sues et al. to obtain the invention as specified in claim 2.

42. As per claim 3 in reference to claim 1, Nakamura in view of Mitsumoto teach claim 1.

43. Sues discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine **(col. 3 line 42: "In the event the protected part becomes disconnected accidentally, the system has a manual override, activated by a code from a keypad in the**

Art Unit: 4147

vehicle that allows a predetermined number of starts”) after the door is unlocked by the door lock control means, the maximum number being set for every electronic key which is certified and registered, and **(col. 6 lines 46-48: “The agent key module includes memory and a communication port programmable from the SCC at the agent's place of business. The agent key can be programmed to operate any particular vehicle; to allow any number of starts.” Each vehicle would have to have a registered code in the vehicle to recognize the agent key.)**

44. Nakamura discloses the engine starting control means allows starting the engine for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, the maximum number corresponding to the electronic key and being memorized in the memory means, after the door is unlocked by the door locking control means. **(Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)**

45. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent No. EP 1 286 297 A1 to Nakamura in view of U.S. Patent No. 5,760,01 to Mitsumoto as applied to claim 1 above, and in further view of U.S.

Art Unit: 4147

Patent No. 5,229,648 to Sues et al. and U.S. Publication No. 2002/0043566 to Goodman et al.

46. As per claim 4 in reference to claim 1, Nakamura in view of Mitsumoto teach claim 1.

47. Sues discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine (**col. 3 line 42: “In the event the protected part becomes disconnected accidentally, the system has a manual override, activated by a code from a keypad in the vehicle that allows a predetermined number of starts”**) after the door is unlocked by the door lock control means, the maximum number being set for every person who is certified and registered (**col. 6 lines 46-48: “The agent key module includes memory and a communication port programmable from the SCC at the agent’s place of business. The agent key can be programmed to operate any particular vehicle; to allow any number of starts.” Each vehicle would have to have a registered code in the vehicle to recognize the agent key.**)

48. Nakamura discloses the engine starting control means allows starting the engine for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means,..., after the door is unlocked by the door locking control means. (**Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the**

Art Unit: 4147

automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)

49. However, Nakamura, Mitsumoto, and Sues do not disclose the maximum number corresponding to the person whose human body certification information is confirmed by the human body information certifying means at the time when the door is unlocked by the door locking control means.

50. Goodman discloses the maximum number corresponding to the person whose human body certification information is confirmed by the human body information certifying means at the time when the door is unlocked by the door locking control means, the maximum number being memorized in the memory means. **(Paragraph 22: “Rather than simply switching on the card 10, it is also possible to provide a keypad for a PIN or any other additional security feature, including for instance a biometrics sensor.” Paragraph 38: “It should be noted that the card 10 counts each time it is activated. Consequently, since the card 10 may be activated without being inserted in a reader or for the purpose of a transaction, a valid counter value may be almost any higher value of the counter compared to that of the last transaction. Also possible is the fact that the counter value be decreasing instead of increasing after each use. It is to be understood that the card 10 will work exactly the same way but in a reverse fashion. This may be useful for limiting a card to a maximum number of activation. However, the same**

Art Unit: 4147

could be realized with increasing counter values if a limit value is programmed.”)

51. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Goodman's biometric transaction means with a limited number of activations in Nakamura, Mitsumoto, and Sues' anti-theft system using biometric verification to improve the system with reasonable expectation that this would result in a car security system that allowed a preset number of biometric certification for unlocking the door. This method for improving Nakamura, Mitsumoto, and Sues' anti-theft system was within the ordinary ability of one of ordinary skill in the art based on the teachings of Goodman because it would help prevent fraudulent access to the car.

(Paragraph 6: "Another known problem is that the information appearing on a magnetic stripe of a card may be read using a portable or otherwise illicit magnetic stripe reader. This allows counterfeiters to create a fake card and use it in addition to the original card." The thief could create a means to mimic the biometrics of the owner of the car. Paragraph 11: "The present invention reduces the difficulties and disadvantages of prior art by providing a credit card, debit card, security card, etc, all of which are hereinafter referred to as a <<transaction card>> or simply as a <<card>>, in which the information on the magnetic stripe emulator is changing with every use. Preferably, this is done by providing the card with a counter which value increments by 1 or any other number each time the card is activated.”)

Art Unit: 4147

52. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura, Mitsumoto, Sues' and Goodman to obtain the invention as specified in claim 4.

53. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over **European Patent No. EP 1 286 297 A1 to Nakamura** in view of **U.S. Patent No. 5,861,816 to Funakoshi et al.**

54. As per claim 7, Nakamura discloses an anti-theft system for a vehicle, comprising:

55. certifying means of an electronic key for starting a vehicle engine, the means being for certifying the electronic key held by a person who intends to start the vehicle; **(Paragraph 19: "An apparatus and method of authentication of the present invention authenticates as to whether there is an agreement between the identification signal of a portable unit (e.g. remote-control transmitter in a keyless entry system of an automobile) and the identification signal stored in an authenticating apparatus main body (to be considered in a form, e.g. incorporated in an automobile).")**

56. human body certification information certifying means, the means being for confirming human body certification information of the person; **(Paragraph 19: "On the other hand, inputted biometrics information (fingerprint, facial image, voiceprint, retina pattern or physiognomy) is compared with previously stored biometrics information, to carry out personal authentication as well.")**

Art Unit: 4147

57. engine starting control means for starting the engine in a case where the electronic key is certified by the certifying means of the electronic key for starting the engine (**Paragraph 41: "The engine immobilizer 106 compares an immobilizer ID 33d previously stored in a memory 33 transmitted by the portable unit 2 with an immobilizer ID 107a stored in the storage section 107, to control engine-ignition on/off (engine lock) depending on agreement or not."**) and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the engine is stopped running; (**Fig: 7: the vehicle checks the inputted biometric information S98 before unlocking the engine immobilizer in S99)**)

58. ... engine is started by the engine starting control means based on the electronic key being certified by the certifying means of the electronic key for starting the engine and the human body certification information of the person being confirmed by the human body certification information certifying means; (**Paragraph 41: "When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up."**)

59. certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the vehicle; and (**Paragraph 19: "An apparatus and method of authentication of the present invention authenticates as to whether there is an agreement between the identification signal of a portable unit (e.g. remote-control**

Art Unit: 4147

transmitter in a keyless entry system of an automobile) and the identification signal stored in an authenticating apparatus main body (to be considered in a form, e.g. incorporated in an automobile).")

60. door locking control means for unlocking the door in a case where the electronic key is certified by the certifying means of the electronic key for getting in the vehicle and the electronic key is an electronic key whose ID information is memorized in the memory means, after the engine is started by the engine starting control means. **(Paragraph 40: "The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.")**

61. However Nakamura does not disclose memory means for memorizing ID information of the electronic key when the engine is started by the engine starting control means.

62. Funakoshi discloses memory means for memorizing ID information of the electronic key when the engine is started by the engine starting control means **(col. 5 lines 19-22: "When the driving completion routine is terminated after the steps S35, S36, at the next engine start-up, therefore, the updated identifying code is stored in both the engine ECU and IMMU and the fail-safe flag is cleared.)**

63. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Funakoshi's memory for memorizing the ID

Art Unit: 4147

information after the engine has started in Nakamura's storage section for the immobilizer ID to improve the system with reasonable expectation that this would result in a system that could memorize the identification codes of the keys that were used to start the car. This method for improving Nakamura was within the ordinary ability of one of ordinary skill in the art based on the teachings of Funakoshi because as summarized in Konakoshi the comparison of the key ID to a stored value to obtain a match will result in a more secure and reliable vehicle access system.

64. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura and Funakoshi to obtain the invention as specified in claim 7.

65. Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over **European Patent No. EP 1 286 297 A1 to Nakamura** in view of **U.S. Patent No. 5,861,816 to Funakoshi et al.** as applied to claim 7 above, and in further view of **U.S. Publication No. US 2002/0097141 to Denison et al.**

66. As per claim 8 in reference to claim 7, Nakamura in view of Funakoshi teach claim 7. Nakamura and Funakoshi discloses an anti-theft system for a vehicle as claimed in claim 7,

67. Denison discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting unlocking the door after the engine is started by the engine starting control means. **(Paragraph 105: "In accordance with the object of the present invention to prevent the unauthorized use of electronic keys, there is provided an electronic access control system**

Art Unit: 4147

which has a plurality of remote electronic locks and a master key that has a number of access programmed therein... The master key 142 contains a non-volatile memory which includes an access code storage 146 for storing the master access code specific to the control system, and a counter 148 for storing the number of access allowed.”)

68. Nakamura discloses the door locking control means allows unlocking the door for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for getting in the vehicle and whose ID information is memorized in the memory means, after the engine is started by the engine starting control means. **(Paragraph 40: “The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”)**

69. However, Nakamura and Funakoshi do not disclose wherein the memory means memorizes, in advance, a maximum number of times for permitting unlocking the door after the engine is started by the engine starting control means.

70. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Denison’s master key that allows a limited number of uses for unlocking an electronic lock in Nakamura and Denison’s door lock control system for the anti-theft system for the vehicle to improve the system with

Art Unit: 4147

reasonable expectation that this would result in a door lock system that can only open a limited number of times with a specified key. This method for improving Nakamura and Funakoshi was within the ordinary ability of one of ordinary skill in the art based on the teachings of Denison because it prevents unauthorized usage of the keys. **(Paragraph 106: " In this way, by limiting the number of times the master key 142 can be used to open locks, the unauthorized use of the master key is effectively prevented.")**

71. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura, Funakoshi and Denison to obtain the invention as specified in claim 8.

72. As per claim 9 in reference to claim 7, Nakamura in view of Funakoshi teach claim 7. Nakamura and Funakoshi discloses an anti-theft system for a vehicle as claimed in claim 7.

73. Denison discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting unlocking the door after the engine is started by the engine starting control means, the maximum number of times being set for every electronic key which is certified and registered. **(Paragraph 105: "Also shown in FIG. 15 is an electronic lock 150 which can be opened by the master key. The electronic lock has a control circuit based on a microprocessor 151 and a key reader 152 for communicating with the master key. When the master key 142 is presented to the key reader 152, the microprocessor 151 of the electronic lock reads the access code stored**

in the master key and compares that code to a preset master access code stored in its memory.”)

74. Nakamura discloses the door locking control means allows unlocking the door for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for getting in the vehicle and whose ID information is memorized in the memory means, the maximum number corresponding to the electronic key and being memorized in the memory means, after the vehicle is started by the engine starting control means. **(Paragraph 40: “The lock system 12 compares a keyless entry ID 33c transmitted upon pushing the keyless entry button 121 on the portable unit 2 with the previously registered keyless entry ID 105a. When the both are in agreement, the control section 11 controls the lock system 12 to release the door lock.”)**

75. As per claim 11 in reference to claim 8, Nakamura in view of Funakoshi teach claim 8. Denison discloses wherein the door locking control means includes permission number reducing means for reducing the number of time of permission for unlocking the door by using the electronic key which is certified by the certifying means of the electronic key for getting in the vehicle and whose ID information is memorized in the memory means, when the vehicle door is unlocked and then opened. **(Paragraph 105: “In conjunction with the opening of the lock, the microprocessor 151 of the electronic lock 150 decrements the number of access stored in the counter 148 of the master key by one. Thus, if the number of access in the counter 148 is initially set**

Art Unit: 4147

to one, after the opening of the lock the counter is reduced to zero, and the master key cannot be used to open another lock.”)

76. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over **European Patent No. EP 1 286 297 A1 to Nakamura** in view of **U.S. Patent No. 5,861,816 to Funakoshi et al.** as applied to claim 7 above, and in further view of **U.S. Publication No. US 2002/0097141 to Denison et al.**, and in further view of **U.S. Publication No. 2002/0043566 to Goodman et al.**

77. As per claim 11 in reference to claim 7, Nakamura in view of Funakoshi teach claim 7.

78. Denison discloses wherein the memory means memorizes, in advance, a maximum number of times for permitting unlocking the door after the engine is started by the engine starting control means, the maximum number being set for every person who is certified and registered, and **(Paragraph 105: “Also shown in FIG. 15 is an electronic lock 150 which can be opened by the master key. The electronic lock has a control circuit based on a microprocessor 151 and a key reader 152 for communicating with the master key. When the master key 142 is presented to the key reader 152, the microprocessor 151 of the electronic lock reads the access code stored in the master key and compares that code to a preset master access code stored in its memory.”)**

79. Nakamura discloses the door locking control means allows unlocking the door for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the

Art Unit: 4147

electronic key for getting in the vehicle and whose ID information is memorized in the memory means,... after the engine is started by the engine starting control means. **(Paragraph 41: “When the engine immobilizer 106 controls the engine to on, in case an operation is made to start up the engine of the automobile 1, control is made to electrically start up the engine. When controlled off, the engine is controlled into a state not to be electrically started up.”)**

80. However, Nakamura, Fukanoshi, and Denison do not disclose the maximum number corresponding to the person whose human body certification information is confirmed by the human body information certifying means at the time when the engine is started by the engine starting control means, the maximum number being memorized in the memory means.

81. Goodman discloses the maximum number corresponding to the person whose human body certification information is confirmed by the human body information certifying means at the time when the engine is started by the engine starting control means, the maximum number being memorized in the memory means. **(Paragraph 22: “Rather than simply switching on the card 10, it is also possible to provide a keypad for a PIN or any other additional security feature, including for instance a biometrics sensor.” Paragraph 38: “It should be noted that the card 10 counts each time it is activated. Consequently, since the card 10 may be activated without being inserted in a reader or for the purpose of a transaction, a valid counter value may be**

Art Unit: 4147

almost any higher value of the counter compared to that of the last transaction. Also possible is the fact that the counter value be decreasing instead of increasing after each use. It is to be understood that the card 10 will work exactly the same way but in a reverse fashion. This may be useful for limiting a card to a maximum number of activation. However, the same could be realized with increasing counter values if a limit value is programmed.”)

82. At the time of invention, it would have been obvious to a person with ordinary skill in the art to use Goodman's biometric transaction means with a limited number of activations in Nakamura, Fukanoshi, and Denison's anti-theft system using biometric certification to start the engine to improve the system with reasonable expectation that this would result in a biometric certification system that allowed the user to start the engine a preset number of times. This method for improving Nakamura, Fukanoshi, and Denison was within the ordinary ability of one of ordinary skill in the art based on the teachings of Goodman because **(Paragraph 6: "Another known problem is that the information appearing on a magnetic stripe of a card may be read using a portable or otherwise illicit magnetic stripe reader. This allows counterfeiters to create a fake card and use it in addition to the original card." The thief could create a means to mimic the biometrics of the owner of the car. Paragraph 11: "The present invention reduces the difficulties and disadvantages of prior art by providing a credit card, debit card, security card, etc, all of which are hereinafter referred to as a <<transaction card>> or simply as a <<card>>.**

Art Unit: 4147

in which the information on the magnetic stripe emulator is changing with every use. Preferably, this is done by providing the card with a counter which value increments by 1 or any other number each time the card is activated.”)

83. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nakamura, Fukanoshi, Denison, and Goodman to obtain the invention as specified in claim 10.

Allowable Subject Matter

84. Claim 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

85. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN LAU whose telephone number is (571)270-5168. The examiner can normally be reached on M-F 7:30-5:00 EST.

86. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4147

87. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KL/

/GEORGE BUGG/
Primary Examiner, Art Unit 4147